

2015 Cary PD CEW In-service

Purpose: To provide the certified student an understanding of the TASER model X2 in order to improve skills and reasonable use in accordance with policy and training.

Objectives: At the end of this block of instruction the student will achieve the following objectives in accordance with the training provided.

1. Demonstrate and apply an understanding of departmental policy related to the use of force and conducted electrical weapons.
2. Be able to list the four "Graham factors" given by the U.S. Supreme Court in use of force evaluation.
3. Demonstrate and understanding of the TASER model X2 in terms of technology, medical, proficiency, and tactics.
4. Be able to differentiate between CEW, firearm, pepper spray, and flashlight from holster through draw of a given tool, stationary.
5. Be able to differentiate between CEW, firearm, pepper spray, and flashlight from holster through draw of a given tool while moving.
6. Be able to spark test CEW without unintentional discharge
7. Be able to activate CEW without unintentional extension of activation
8. Be able to demonstrate accuracy from a stationary position
9. Be able to demonstrate accuracy while moving
10. Be able to demonstrate proficiency in weapon retention

Note: each drill must be explained and demonstrated before the initial practical exercise

Course Time: Four (4) hours

Instructional Method: Lecture/Demonstration/Practical

Materials Required: Lesson plan, handouts

Equipment: Computer, projector, screen

Student Material: Pen/pencil, note paper, handouts, Taser devices, practice cartridges, holsters, training firearm, pepper spray, duty belt with holsters

Activity Level: low/moderate

References:

Taser International Instructor Certification Lesson Plan. Versions 19. Taser International. Scottsdale, AZ. 2013.

Takano, G.K., Taylor, J.A. "Taser X-26 Lesson Plan". Raleigh Police Department. Raleigh, NC. November 2006 (revised 2014).

Takano, G.K., Taylor, J.A. "Raleigh Police Department X2 Product Test". Raleigh Police Department. Raleigh, NC. February 2012.

Takano, G.K. "X26P Transition Course". Raleigh Police Department. Raleigh, NC. 2014.

Takano, G.K. "Advanced CEW Instructor Course", Mindset Force Management. Raleigh, NC. 2015.

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- I. Introduction
 - A. Conducted electrical weapons are a proven useful option in dealing with non-compliant active resisters who pose a reasonable threat to officers. Research clearly demonstrates that the reasonable use of CEWs not only reduces injuries to officers, but to suspects as well. There are numerous incidents of CEWs being used effectively where in the past deadly force was justifiably used.
 - B. Training Objectives
 - C. Unfortunately poor or incomplete training of CEWs have led to incidents of weapons confusion, unintentional discharges, unintentional activations, and having a CEW taken by suspects. These have resulted in injuries to officers, innocent bystanders, and excessive force on suspects. Law enforcement officers have lost their jobs, been sued, and have been sentenced to prison over the misuse of CEWs. Poor skills competency played a significant role.
- II. Body
 - A. Weapons Confusion is caused by a number of factors. Since CEWs are shaped similar to firearms, it is easy to understand how one can be confused for the other. This is compounded further by firearms training. The average officer has drawn and fired his/her firearm hundreds if not thousands of times in basic training and annual training/qualifications. Combat courses, stress courses, and even the design of qualification courses have built in a strong physiological memory for the quick drawing and firing of a pistol. Unless a strong enough new "muscle memory" is created for a similar task, the dominant muscle memory may be confused. The end result is you draw and fire your firearm when you intended to draw and fire your CEW. Simply telling officers to make sure they draw the intended tool is

not sufficient. There must be sufficient practice in creating a different muscle-memory path that will be consistent under stressful conditions.

Take the following suggestion as a tactical philosophy option to reduce the likelihood of weapons confusion. There is really only one tool that an officer carries that needs the option of deciding to use it before it is even drawn, your firearm. One can think of numerous situations in which officers would reasonably decide to draw and fire their weapon as quickly as possible before they have even begun the process. An example would be a subject pointing a firearm and firing at them. A reasonable officer may have decided that deadly force is justified and intends on shooting a subject quickly to stop the deadly threat. The average officer would be able to draw and fire two shots in less than two seconds. Many officers could do it in less time. The point here is fractions of a second delay in action can result in an officer being killed in a deadly encounter. CEW use is not primarily designed for deadly encounters. Since the encounter is not imminently deadly the officer has more options and usually more time. So philosophically, there should be only one tool that officers may decide to draw and fire before a deadly threat; that is the firearm. Instructing officers the options of increasing reactionary distance (movement, blocking and/or striking, etc.) to allow for efficient drawing and verification that the right tool has been un-holstered before use greatly reduces the risk of weapons confusion and use of the unintended tool.

1. Mechanics of drawing/holstering should be the first drill – simple proper drawing of the CEW from its holster. Establish a grip, release holster safety, clear holster, and disengage CEW safety/present CEW are the basic drawing steps. Have students practice step by step numerous times before allowing continuous practice to begin. “Indexing” of the trigger finger is important. Due to the trigger pressure to fire is lighter than most firearms, keeping the finger off the trigger until the officer is on target and has decided to fire is important to avoid unintentional activation. Holstering practice is basically the reverse order with engaging the safety as the first step. Again this process should be step by step at first (use of spent training cartridges is recommended initially).
2. Basic Tool Decision Making Drill – This drill is designed to build upon the mechanics of drawing/holstering and initial anti-weapons confusion training. Instruct students to draw the tool the instructor calls out from the tools carried by the officer. This is a non-firing drill, so students are not to place their finger on triggers of tools (training firearm, CEW, training pepper spray). Instructor varies the order of the tools to be drawn and looks for signs of weapons confusion to give feedback to students.

3. Escalating/de-escalating multiple tools drill- This drill is designed as a progressive anti-weapon confusion drill for quick decision making when escalating or de-escalating in tool drawing. Instruct students to draw a CEW then quickly transition to firearm. Also start with drawing the firearm and then transition to CEW. It is recommended when “de-escalating” from firearm to CEW to holster the firearm first. This is to eliminate weapons confusion when a situation no longer justifies a firearm. The same rule does not apply when “escalating” from CEW to firearm. If an officer accidentally discharges a CEW instead of a firearm, there is no concern for excessive force.
4. Moving – the above drills can be done moving. The likelihood of an officer moving or needing to move while draw a tool is reasonable. This additional task is likely to increase weapons confusion if not practiced.
5. “Box or Hood” Drill – This is a quick decision drill designed to give students practice on short, overt stimulus with a quick response. This drill can be done with spent cartridges and non-firing training guns or with training cartridges and simunitions. The training area, safety equipment, and instructors must be certified for the latter.

A hood is placed on the student or instructed to close his/her eyes. The student is instructed a situation will be place before him/her that requires immediate action. The student is to respond by drawing the appropriate tool, if necessary and challenge the subject. The student cannot move from his/her starting point. A role player is positioned at various locations from the student with instructions to give obvious verbal and non-verbal cues to either deadly, non-deadly threatening, or no threat at all when the student’s hood is removed. The drill is reset quickly and repeated with varying threats presented to the student.

6. One dart open circuit/extending probe spread drill is designed to let students practice completing a circuit or improving pain/incapacitation effects using the drive stun of the device. Variations can be done using inert or live training cartridges (do not use spent live cartridges due to live drive stun contacts). Have student discharge training cartridge at role player (simulation suit). Student moves in tactically and drive stuns role player on leg or back to improve probe spread circuit.
7. Use of force scenario practice/test: In order to demonstrate reasonable application of CEWs, use of force scenario practice and testing should be used. The scenario should be general use of force options that may or may not justify the use of a CEW.

B. Spark Testing

Spark testing is an important function to ensure reliability of CEWs. Most agencies have had several unintentional discharges that have occurred during spark tests. Many are the result of being interrupted during the spark testing procedure or forgetting to do each step of the procedure. There was a high correlation with unintentional discharges of CEW during spark tests and whether or not the officer had been spark testing previously on a regular basis. The design of the TASER X2 is superior to the previous models in terms of spark testing design. The trigger does not have to be squeezed in order to conduct a spark test. The ARC button now allows a spark test to be performed even with the device loaded.

Spark testing should not be done in view of the public. A spark test should be performed *at least once per work cycle for a full 5 seconds cycle*. A spark test will only be conducted within the corporate limits of the Town of Cary. Accidental deployments must be reported immediately to the on-duty *Watch Commander*. Officers should visually inspect the CEW in a safe manner to ensure both firing bays are operational and displaying visible arc.

1. Face safe direction with wall as barrier
2. Draw CEW, point in safe direction, ensure safety is engaged
3. Inspect CEW unit for cracks and damage
4. Disengage safety, check CID display, laser and light function is correctly set
5. Point in safe direction, depress ARC button
6. Check CID, check arc from angle (do not point at body), listen to pulse rate- vary times of spark test duration (1 -5 seconds)
7. Engage safety

Practical Drill – Spark test procedure practice should be done step by step explaining the purpose of each step. It is important to instruct students that the spark test procedure must be done slowly and deliberately each time. It should never be done fast. If they are interrupted or forget the next step, they are to stop, ensure the CEW safety is engaged and start over.

C. Accuracy

CEW cartridges fire probes that are attached to wires. The shape of the probes also adds to the reason the accuracy of fired probes are up to three inches off point of aim (see manufacturer's instructor power point). This accuracy variability was also verified by our testing. Understanding that CEWs are more of an "area of aim" as opposed to "Point aim" tool for accuracy is important to reduce the likelihood of hitting unintended areas of the body. A three inch variance for from

point of aim is equal to a six inch diameter circle. This does not include any factors that affect point of aim stability that affect firearm accuracy (sight picture, trigger squeeze, grip, stance, stress, etc.). Any firearms weakness for accuracy should be expected to carry over to CEW accuracy.

The trigger pressure need to activate the CEW is approximately 3 ½ lbs for X26/X26p and 5 ¼ to 5 ¾ lbs for the X2. Many firearms pistols have a higher trigger pressure. This has to be instructed and sufficient practice given to ensure officers have ingrained a separate physiological/psychological path.

There is only a slight upward pressure to the front of the CEW device when discharged. It is substantially less than a pistol. This mainly comes from the bottom dart channel that is angles downward (8 degrees for X26/X26P and 7 degrees for the X2).

Intended targeting: the manufacturer has listed “preferred targeting zones”. For shots to the front of the body, below the chest is recommended to reduce probability of hitting the head and neck. It is also list to increase heart to dart distances and lower the probability of having cross vector hits over the heart. It is important to train with frontal shots with CEWs due to firearms “center mass” shooting.

D. Weapon Retention

Weapon retention can become confusing to officers with the addition of CEWs as part of normal duty gear. With pepper spray, CEW, firearm, and baton, there are more tools than officers have hands to protect them. We have to caution giving officers a specialized weapon retention technique for each piece of equipment. Too many techniques and “what ifs” can create more confusion and training issues. If we can use previously learned skills and expand on current tactics, weapon retention learning and proficiency are more likely be transferred to field use.

As a general rule, if a subject attempts to go after any tool on a duty belt, the officer will protect his/her firearm first. Control of the most dangerous weapon is the primary goal. This does not mean that officers do nothing to retain other tools if attempts are made to take them. The following tactic is simple and does not require fine motor movements or overly complex. It also addresses when a person attempt to take any tool of a belt.

Reactionary distance, positioning, and stance are all preventative tactics that deter and allow officers to see and react to sudden attacks.

Weapon retention of the duty handgun is far more important than retaining the Taser. However, one must understand the incapacitation that the Taser can create if used against the officer and have some means of preventing someone from taking it.

Using the same principles as taught in BLET handgun retention, the officer can use the support side forearm to block away attempts to grab the Taser. Should a suspect grab hold of the Taser (hand on top or under officer's protective grip) the officer should be prepared to move the officer's hip into the suspect to reduce leverage by the suspect. Striking and stunning with kicks, stomps, knees, head-butting, and biting can be done to affect a release and create a reactionary gap. The officer should use the strong hand to protect his/her firearm as a primary protection.

Does the fact that a suspect attempting to take a CEW justify the use of deadly force to prevent the suspect's attempt? It depends. There has not been a case in which this has been decided by the State Supreme Courts, Circuit Courts of Appeal, or the U.S. Supreme Court. The "Graham" factors and the totality of the circumstances will dictate. I have spoken to several police attorneys and use of force experts. The general consensus is if the officer can articulate (this is the key) he/she reasonable believes a suspect is actively attempting to take the officer's CEW and intends to use it on the officer to incapacitate the officer in order to cause serious physical injury or death of that officer (or others) would be justified in using deadly force to stop the suspect from taking the CEW.

E. Legal Review

Understanding the Supreme Court decision *Graham v Conner* is essential for officers. Every court uses and applies concepts and the process this case outlines. The "Graham Factors", seriousness of the offense, threat to the officer or others, active resistance, and flight or evading arrest are considered by all courts when evaluating uses of force for reasonableness.

Each factor has a range and is not conclusive by itself. The fact that all occur in a given instance does not mean an officer's use of force is reasonable. These factors are simply a minimum of circumstances courts must consider. Officers need to understand that each use of a CEW must be justified.

The 4th Circuit Court of Appeals helps us understand this with their ruling in *Meyers v Baltimore*,

“force justified at the beginning of an encounter is not justified even seconds later if the justification for the initial force has been eliminated.”

A review of Circuit Courts of Appeal rulings have been consistent. When a subject was assaultive or imminently assaultive to officers or others the use of a CEW in dart or drive stun was reasonable. When a subject's noncompliance was not assaultive, and the subject was not a threat to other, was being arrested for a minor offense, the courts found most of these incidents as unreasonable. The courts found CEW use on some high end passive resistance as reasonable, but they had unusual circumstances where there existed threat to the officers from the location of the incident.

A review of criminal convictions for excessive force of CEW use, disciplines for misuse, and the understanding of the use of force are the main causes. Because CEWs are simple to use and highly effective, they magnify an agency's use of force training and professional conduct. Prior to CEWs in order for an officer to abuse force, he/she needed the physical ability as well as poor character. What would take years of training, skill, and knowledge of martial arts is now contained in a CEW. Torture, abuse, and bullying can now be done with a squeeze of a trigger. Poor understanding of legal, technical, medical, and training of CEWs have led to reasonable officers misusing CEWs and being disciplined, fired, sued, and convicted of manslaughter. It is important for officers, instructors, and managers to understand how easy it is to misuse and abuse CEWs and how this is more likely to happen with poor/incomplete training.

F. Branched Force Decision Making

It may seem simple in deciding if a subject is compliant or non-compliant in a classroom setting. In the field, circumstances can easily make a simple decision complex if you become distracted. For example, you are dispatched to a disturbance call. Upon your arrival you see a male approximately 6'5" weighing about 350lbs rolling over a vehicle and shouting obscenities. Upon seeing you, this subject faces you, flexes all his muscles with closed fists and roars like a bear. Is this subject compliant or non-compliant?

If you said non-compliant, you are wrong. Even if you said compliant, you are still wrong. How can this be? He has verbal cues: raspiness in voice, repeated phrases, cursing. He has non-verbal cues: fist clenching, heavy breathing, target glancing. You just said that these are cues for potential violent behavior. Is not this person potentially violent? Hell, you just saw him roll over a car. Of course he is

potentially violent. What we do not know, is he compliant or non-compliant. We won't know the answer to this until we do what? Ask him to do something.

Getting the right information as soon as possible allows you to make reasonable decisions faster. The faster the decision, the quicker the reaction. Before you start investigating why the "Hulk" above is tipping over a car, you need to know if this person is compliant or non-compliant. Instruct him to have a seat or move to a desired location. If he does what you ask, then he is compliant. If he doesn't do what you ask, then he is non-compliant. Checking compliance as soon as possible frees up your ability to act if necessary.

When we are under high stress or hazardous conditions, our bodies can change. Changes such as "tunnel vision" or "auditory exclusion" describe some of the "fight or flight" changes that can occur in our bodies. How we make decisions and problem solve also can change under stress conditions. Understanding how and why this can happen, will allow us to work with stress, not fight against it.

We know, when threatened, the mind will dump chemicals into the body to give muscles extra energy to fight or run away. The mind can also change decision making for this purpose. What this means is under a threat, the mind is primed for decisions that deals with fighting or running. The mind does not want to think about mathematics problem solving or verb conjugation. By having less choices, the decision to act is faster. If I gave you seven things to choose from and one of them is the correct choice it would take longer to act than if I only gave you two choices and one of them was the correct one.

Simplifying how we make decisions in potentially dangerous situations works with the fight or flight syndrome. How do we put this into practice? One way is to "branch" our force decision making in terms of compliance and non compliance. The first branch is to answer the question, "is the person, compliant or non-compliant? The answer is a quick yes or no. If yes, then the decision making is easy. Instruct the person into a position of disadvantage until the scene is secure. If no, go to the next branch. The next branch leads to "is the behavior deadly or not?" If yes, then you know the situation is deadly, act. If no, then you know the situation is not deadly. Next branch, "is the non-compliance passive or active?" If passive, then act. If active, then act. This branched process can happen very fast and look at the order your decisions are made. Is there compliance? Is it deadly? Is it passive or active? Here is an example how fast a decision can be made in a worst case scenario. You are investigating a suspicious person outside a closed business at 2:00 a.m. Upon approach you see the subject is facing away with his hands in his pockets. You identify yourself and order the subject to stop and not to move. When you make this

statement the subject quickly starts turning toward you and begin pulling his right hand from his pocket and grabbing an object in his front waistband. Is the subject compliant? NO. Is the non-compliance deadly? Yes, act. Most of you would probably say it took you less than a second. Now imagine how much slower things could have been if you did not check compliance from the start?

G. Technical/Medical Review

TASER models X2 and X26P have the same pulse wave and output system. Manufacturer's information on technical specification lists the X2 with a pulse duration of 50-125 microseconds and a full pulse charge of 63 (+ or - 9) microcoulombs. Current listed is 1.2 milliamps. Peak loaded voltage: 840-1440 volts. The device uses a "Precision Shaped Pulse". The pulse shape is different than the X26 ("Shaped Pulse"). It is unknown what the peak amplitude of the pulse wave is or the charge amount delivered during this peak at this time (not in manufacturer's specifications). The overall delivered charge per pulse is less than the X26.

Both models use "charge metering". The device checks the strength of the circuit (good, partial, none) with each pulse. Charge is increased to improve a poor circuit or to create a circuit if none is detected (there is a maximum charge output the device will not go over).

Auto-Shutdown Performance Power Magazine (APPM) : The models come with an auto shutdown battery option. This battery automatically shuts off a cycle at the end of five seconds even if the trigger is still depressed beyond five seconds. This feature also gives an audible sound at four seconds to let the operator know the cycle is about to end. This audible sound will continue as long as the trigger is depressed beyond the preset five second cycle. Squeezing the trigger multiple times under these conditions will not extend the activation while the cycle is in operation. A new cycle will only begin when the originating cycle ends and the trigger is release and re-squeezed. A cycle can be stopped by engaging the safety at any time.

Medical

Research on the TASER X2 is limited. Due to its similarity to the X26 we feel the vast research on the X26 is applicable. Although the probability for causing direct heart effects is low (less than 1/100,000 for ventricular fibrillation), cross vectoring the heart with the top and bottom probe or probe hits over the heart area should be avoided to minimize this risk further. The primary source for injuries is from falling. Depending on the affected area, falling to the ground uncontrolled and/or semi-controlled is the norm. Although serious physical injury or death from this type of fall is unlikely, it is possible. Significant cuts, contusions, abrasions, or other injuries from falling are to be expected.

If a subject is activated while in water there is no risk of additional types of shock, but there is a risk of drowning do to loss of muscle control.

Serious physical injury can occur if the probe hits the eyes, throat (arteries), or testicles. Muscle, spine, tendon, or joint injuries can occur. The reported number of these types of injuries is very small compared to the large number of training and field exposures done to date. Preexisting injuries and poor training design appear to be a factor in the number of this type of reported injury during training exposures. Ignition Source - CEW can ignite flammable liquids and vapors. If a subject has flammable liquids/vapors on or about him/her, ignition is possible. Other possible medical injuries from direct CEW exposure are metabolic acidosis, hyperkalemia, and Rhabdomyoysis. It is not likely this can occur with few activations. For this reason, repeated and prolonged activations should be avoided if possible.

III. Conclusion

A. Summary

During this block of instruction the student reviewed manufacturer's information on the model X2, departmental policy, and practiced several CEW skills and application. The drills covered training areas that need practical exercises in order to avoid weapons confusions, unintentional discharges, and improve officer safety. The testing of these skills demonstrate the students understanding and demonstrated proficiency.

B. Questions

C. Closing Statement

Conducted electrical weapons have been used by law enforcement for decades. But it has only been since the mid 1990s that the technology improved making CEWs an effective tool when dealing with assaultive and dangerous subjects whose behavior require police intervention. Due to CEW similarity to firearms in general design, training is necessary avoid weapons confusion. It is also a tool that needs to be guarded against being taken. In order to strengthen the benefits of this training, officers need to continually train these skills on a regular basis.